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HAHN LOESER + PARKS

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#121/12

PATENT

10/4/02

Practitioner's Docket No. 6014-2-CON

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Keith R. Leighton Group No.: 1733

Application No.: 09/368,846 Examiner: Aftergut

Filed: 08/05/1999 Date: October 2, 2002

For: HOT LAMINATION PROCESS FOR THE MANUFACTURE OF A COMBINATION  
CONTACT/CONTACTLESS SMART CARD AND PRODUCT RESULTING THEREFROM

**RESPONSE UNDER  
37 C.F.R. § 1.116  
EXPEDITED PROCEDURE  
EXAMINING GROUP**

OFFICIAL  
FAX RECEIVED  
OCT 03 2002  
GROUP 1700

Box AF  
Commissioner for Patents  
Washington, D.C. 20231

## AMENDMENT OR RESPONSE AFTER FINAL REJECTION—TRANSMITTAL

- Transmitted herewith is an amendment after final rejection (37 C.F.R. 1.116) for this application.

## STATUS

- Applicant is a small entity. A statement was already filed.

## EXTENSION OF TERM

- The proceedings herein are for a patent application and the provisions of 37 C.F.R. 1.136 apply.  
Applicant petitions for an extension of time under 37 C.F.R. 1.136 (fees: 37 C.F.R. 1.17(a)(1)-(4)) for two months:

Fee: \$200.00

CERTIFICATION UNDER 37 C.F.R. §§ 1.8(a) and 1.10\*

I hereby certify that, on the date shown below, this correspondence is being facsimile transmitted to the Patent and Trademark Office, (703) 305-7718.



Signature

Date: October 3, 2002

Michael H. Minns  
(Type or print name of person certifying)

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**FEE FOR CLAIMS**

4. The fee for claims (37 C.F.R. 1.16(b)-(d)) has been calculated as shown below:

	(Col. 1) Claims Remaining After Amendment	(Col. 2) Highest No Previously Paid For	(Col. 3) Present Extra	SMALL ENTITY	
				Rate	Addit Fee
Total	23	Minus 27	= 0	x \$0 =	\$0
Indep	2	Minus 3	= 0	x \$42 =	\$0
First Presentation of Multiple Dependent Claim			+ \$140 =	\$0	
				Total Addit. Fee	\$0

Total additional fee for claims required \$0.00

**FEE PAYMENT**

5. Authorization is hereby made to charge the amount of \$200.00 to Deposit Account No. 15-0450.

Charge any additional fees required by this paper or credit any overpayment in the manner authorized above.

A duplicate of this paper is attached.

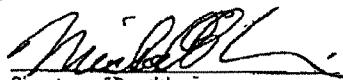
**FEE DEFICIENCY**

6.

If any additional extension and/or fee is required, charge Account No. 15-0450.

If any additional fee for claims is required, charge Account No. 15-0450.

Date: October 3, 2002



Signature of Practitioner

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

#13/B  
VDE

Docket No.: 6014-2-CON

10/14/02  
JAH  
10/19/02

In re patent application of: Keith Leighton Group Art Unit: 1733

Serial No.: 09/368,846 Examiner: J. Aftergut

Filed: August 5, 1999

For: Hot Lamination Process for the Manufacture of a Combination Contact /Contactless Smart Card and Product Resulting Therefrom

AMENDMENT AND REQUEST FOR RECONSIDERATION  
UNDER 37 C.F.R. §1.111

RECEIVED OCT 03 2002  
GROUP 1700

OFFICIAL

Assistant Commissioner For Patents

Washington, D.C. 20231

Sir:

In response to the Official Action dated May 8, 2002, please amend the above-identified application as follows:

IN THE CLAIMS:

Cancel claims 6, 18 through 22 and 30.

1. (Twice Amended) A process for incorporating at least one electronic element in the manufacture of a plastic card, comprising the steps of:
  - (a) providing first and second plastic core sheets;

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Serial No. 09/368,848

(b) positioning said at least one electronic element in the absence of a non-electronic carrier directly between said first and second plastic core sheets to form a core, said plastic core sheets defining a pair of inner and outer surfaces of said core;

(c) positioning said core in a laminator apparatus, and subjecting said core to a heat and pressure cycle, said heat and pressure cycle comprising the steps of:

(i) heating said core for a first period of time;

(ii) applying a first pressure to said core for a second period of time such that said at least one electronic element is encapsulated by said core;

(iii) cooling said core while applying a second pressure to said core, the second pressure being at least 10% greater than the first pressure; and

(d) milling a region of said core to a controlled depth so as to form a cavity which exposes at least one contact pad of said at least one electronic element.

15. (Amended) A process as recited in claim 1 comprising the further step of inserting an electronic contact element a second electronic element into said cavity, the second electronic element being in electrical communication with the at least one electronic element.

25. (Amended) The process according to claim 1, wherein the pressure on said core is in step (c)(i) is less than 10 p.s.i.

27. (Amended) A process for incorporating at least one electronic element in the manufacture of a plastic card, comprising the steps of:

(a) providing first and second plastic core sheets;

(b) positioning said at least one electronic element in the absence of a non-electronic carrier directly between said first and second plastic core sheets to form a core, said plastic core sheets defining a pair of inner and outer surfaces of said core;

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(c) positioning said core in a laminator apparatus, and subjecting said core to a heat and pressure cycle, said heat and pressure cycle comprising the steps of:

- (I) heating said core for a first period of time;
- (II) applying a first pressure to said core for a second period of time such that said at least one electronic element is encapsulated by said core;
- (III) cooling said core while applying a second pressure to said core, the second pressure being at least 10% greater than the first pressure.

29. (Amended) The process according to claim 28, wherein the step of forming a cavity in said core comprises:

after step (c), milling a region of said core to a controlled depth so as to form a cavity which exposes at least one contact pad of said at least one electronic element.

31. (New) The process according to claim 29, further comprising:

inserting a second electronic element into said cavity, the second electronic element being in electrical communication with the at least one electronic element.

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Serial No. 09/368,846

REMARKS

Claims 1 through 5, 7 through 10, 12 through 17, 23 through 29 and 31 are in the case. Claims 1, 15, 25, 27 and 29 are amended by this amendment. Claims 6, 18 through 22 and 30 are cancelled by this amendment. Claim 31 is added by this amendment.

All claims directed to the non-elected invention have been cancelled.

Attached is a clean version of the changes made to the specification and claims by the current amendment. The attached pages are captioned "Clean Version Incorporating Changes Made"

The Examiner stated that the terminal disclaimer filed on February 18, 2002 does not comply with 37 C.F.R. § 1.321 (b) and/or (c) because the attorney, Michael H. Minns, who signed the terminal disclaimer is not of record and therefore is not authorized to sign a terminal disclaimer in the capacity as an attorney or agent acting in a representative capacity.

Enclosed is an Associate Power of Attorney signed by the attorney of record, Mark A. Watkins appointing Michael H. Minns, along with others, to represent Applicant in this application. Also enclosed is a new terminal disclaimer signed by an attorney of record.

Claims 1 through 17, 23 through 29 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 through 16 of U.S. Patent no. 6,036,099. Claims 1 through 17, 23 through 29 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 through 17 of U.S. Patent No. 5,817,207 in view of Templeton, Jr. et al.

Enclosed is a terminal disclaimer disclaiming the term of any patent that issues from this application that extends beyond the term of U.S. Patent No. 6,036,099 or

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U.S. Patent No. 5,817,207. Applicant submits that this terminal disclaimer obviates this rejection.

Claim 27 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Japanese Patent 6-176214 in view of UK 2,279,610 optionally further taken with UK 2,225,283. Claims 1, 4 through 10 and 14 through 17 and 25 through 29 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Japanese Patent 6-176214 in view of UK 2,279,610 and Templeton, Jr. et al optionally further taken with UK 2,225,283. Claims 2, 3, 11 through 13, 23 and 24 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Japanese Patent 6-176214 in view of UK 2,279,610 and Templeton, Jr. et al optionally further taken with UK 2,225,283, and further taken with UK 2,294,899.

Independent claims 1 and 27 have been amended to require that the second pressure be at least 10% greater than the first pressure. With respect to UK 2,279,610, on page 12, lines 8-10, the patent application discloses that after the temperature has been raised to about 155°C, full lamination pressure is applied. Next, while still under pressure the assembly is cooled and brought down to room temperature. UK '610 is silent as to what pressure is used while the laminated card assembly is being cooled. There is no teaching or suggestion in UK '610 to increase the pressure during cooling to at least 10% greater than the pressure applied during heating, as claimed by Applicant in independent claims 1 and 27.

With respect to UK 2,225,283, on page 11, lines 6-13, the patent application discloses that the lamina build-up is either placed into a pre-heated press and then full pressure is immediately applied or the pressure is gradually increased. In one example, the press is pre-heated to 140°C and then pressure is applied in steps. Finally, the laminate is cooled with the pressure maintained at its highest value. UK '283 teaches maintaining the pressure during cooling at its highest value. UK '283 does not teach or disclose increasing the pressure during the cooling process. One skilled in the art would not be able to conclude that UK '283 teaches increasing pressure during

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the cooling process. Rather, one skilled in the art would conclude that the phrase "maintaining the pressure during cooling at its highest pressure" refers to maintaining pressure during cooling at the highest pressure applied during heating. There is no teaching or suggestion in UK '283 to increase the pressure during cooling to at least 10% greater than the pressure applied during heating, as claimed by Applicant in independent claims 1 and 27.

The problem being solved by Applicant is the problem of forming a laminated card with embedded computer chips and electronics that are thin enough to work in connection with existing card reading machinery (specification, page 3, lines 11-20). The problem being solved by UK '283 is preventing flexing of the card, which can cause cracking in the card layers, page 1, lines 15-17. UK '283 then addresses this problem by orienting the "grain" in different card layers at right angles to one another (page 3, lines 23-31) and by embedding star shaped stress reduction members in the laminate (page 4, lines 28-31). Because UK '283 is solving a different problem, laminate cracking, than the problem being solved by Applicant, overall thickness of the laminated card, one skilled in the art would not consider UK '283 to be relevant to the problem of overall card thickness. Therefore, even if UK '283 taught increasing the pressure during cooling, there would be no motivation to combine UK '283 with the other references to solve the problem of card thickness.

Even assuming that the combination of Japanese Patent 6-176214 in view of UK 2,279,610 optionally further taken with UK 2,225,283 were a proper combination, the three references do not teach or suggest, either singly or in combination, Applicant's method as claimed in claims 1 and 27 where the laminate core is cooled while applying a pressure at least 10% greater than the pressure applied to the heated core. Further, this amendment should not require additional searching or raise additional issues because the limitation that the pressure during cooling is at least 10% greater than the pressure applied to the heated core has been present in claim 7 as originally filed.



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In view of the above, it is respectfully submitted that claims 1 through 5, 7 through 10, 12 through 17, 23 through 29 and 31 are in condition for allowance. Re-consideration of the rejections is requested and allowance of the claims is solicited.

Respectfully submitted,  
Hahn Loeser & Parks LLP

Date October 2, 2002

  
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Docket No. 6014-2-CON  
Serial No. 09/368,846

**Clean Version Incorporating Changes Made**

**IN THE CLAIMS:**

Cancel claims 6, 18 through 22 and 30.

1. (Twice Amended) A process for incorporating at least one electronic element in the manufacture of a plastic card, comprising the steps of:  
(a) providing first and second plastic core sheets;  
(b) positioning said at least one electronic element in the absence of a non-electronic carrier directly between said first and second plastic core sheets to form a core, said plastic core sheets defining a pair of inner and outer surfaces of said core;  
(c) positioning said core in a laminator apparatus, and subjecting said core to a heat and pressure cycle, said heat and pressure cycle comprising the steps of:  
(i) heating said core for a first period of time;  
(ii) applying a first pressure to said core for a second period of time such that said at least one electronic element is encapsulated by said core;  
(iii) cooling said core while applying a second pressure to said core, the second pressure being at least 10% greater than the first pressure; and  
(d) milling a region of said core to a controlled depth so as to form a cavity which exposes at least one contact pad of said at least one electronic element.

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15. (Amended) A process as recited in claim 1 comprising the further step of inserting a second electronic element into said cavity, the second electronic element being in electrical communication with the at least one electronic element.

28. (Amended) The process according to claim 1, wherein the pressure on said core in step (c)(i) is less than 10 p.s.i.

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Serial No. 09/368,846

*b4* 20 21. (Amended) A process for incorporating at least one electronic element in the manufacture of a plastic card, comprising the steps of:

- (a) providing first and second plastic core sheets;
- (b) positioning said at least one electronic element in the absence of a non-electronic carrier directly between said first and second plastic core sheets to form a core, said plastic core sheets defining a pair of inner and outer surfaces of said core;
- (c) positioning said core in a laminator apparatus, and subjecting said core to a heat and pressure cycle, said heat and pressure cycle comprising the steps of:
  - (i) heating said core for a first period of time;
  - (ii) applying a first pressure to said core for a second period of time such that said at least one electronic element is encapsulated by said core;
  - (iii) cooling said core while applying a second pressure to said core, the second pressure being at least 10% greater than the first pressure.

*b5* 22 23. (Amended) The process according to claim 20, wherein the step of forming a cavity in said core comprises:

after step (c), milling a region of said core to a controlled depth so as to form a cavity which exposes at least one contact pad of said at least one electronic element.

*b6* 24 25. (New) The process according to claim 23, further comprising:  
inserting a second electronic element into said cavity, the second electronic element being in electrical communication with the at least one electronic element.

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Practitioner's Docket No. 6014-2-CON

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Keith R. Leighton Group No.: 1733  
Application No.: 09/368,846 Examiner: Aftergut  
Filed: 08/05/99 Date: October 1, 2002  
For: Hot Lamination Process For The Manufacture of a Combination Contact/Contactless Smart Card and Product Resulting Therefrom

#14/UDC  
10/24/02

Commissioner for Patents  
Washington, D.C. 20231

ASSOCIATE POWER OF ATTORNEY (37 C.F.R. § 1.34)

Please recognize as Associate Practitioners in this case:

Michael H. Minns, Reg. No. 31,985; Edwin W. Oldham, Reg. No. 22,003; Scott M. Oldham, Reg. No. 32,712; Stephen L. Grant, Reg. No. 33,390; R. Eric Gaum, Reg. No. 39,199; Alexander D. Bommarito, Reg. No. 44,036; Robert J. Clark, Reg. No. 45,835; Eryn R. Ace, Reg. No. 44,491; all of:

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Mark A. Watkins  
Signature of Practitioner

Mark A. Watkins  
HAHN LOESER & PARKS LLP  
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> Practitioner's Docket No. 6014-2-CON

PATENT

#15  
AU

10-8.03

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Keith Leighton      Group No.: 1733  
Application No.: 09368,846      Examiner: J. Aftergut  
Filed: August 5, 1999      Date: October 2, 2002  
For: Hot Lamination Process for the Manufacture of a Combination  
Contact/Contactless Smart Card and Product Resulting Therefrom

Assistant Commissioner for Patents  
Washington D.C. 20231

TERMINAL DISCLAIMER TO OBLIVIATE  
A DOUBLE PATENTING REJECTION (37 C.F.R. Section 1.321(c))

Identification of Person(s) Making This Disclaimer

I, Michael H. Minns, represent that I am the attorney of record.

EXTENT OF DISCLAIMANT'S INTEREST

The extent of the interest in this invention that the disclaimant owns is in the whole of this invention.

DISCLAIMER  
(Obviousness-Type Double Patenting Rejection Over A Prior Patent)

Petitioner hereby disclaims, except as provided below, the terminal part of any patent granted on the instant application, which would extend beyond the expiration dates of Patent Nos. 5,817,207, and 6,036,099 as presently shortened by any terminal disclaimer(s). Petitioner hereby agrees that any patent so granted on the instant application shall be enforceable only for and during such period that it and the above-listed patents are commonly owned. This agreement runs with any patent granted on the instant application and is binding upon the grantee, its successors, or assigns.

In making the above disclaimer, 1) disclaimant is not admitting the propriety of the merits of the double patenting rejections; and 2) disclaimant does not disclaim the terminal part of any patent granted on the instant application that would extend to the expiration date of the full statutory term as defined in 35 U.S.C. Sections 154 to 156 and

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Serial No. 09/368,846

173 of the patents forming the basis of the double patenting rejection, namely, Patent Nos. 5,817,207 and 6,036,099, as presently shortened by any terminal disclaimer, in the event that either patent later expires for failure to pay a maintenance fee, is held unenforceable, is found invalid by a court of competent jurisdiction, is statutorily disclaimed in whole or terminally disclaimed under 37 C.F.R. Section 1.321, has all claims cancelled by a reexamination certificate, is reissued, or is in any manner terminated prior to expiration of its full statutory term as presently shortened by any terminal disclaimer, except for the separation of legal title stated above.

**DISCLAIMER FEE (37 C.F.R. Section 1.20(d))**

Small entity--fee \$55.00.

Small entity statement already filed in patent application 09/918,582 on August 18, 1997.

**FEE PAYMENT**

The \$55.00 fee was enclosed with the response filed March 5, 2002.

Charge Account No. 15-0450 for any fee deficiency.

Date: October 2, 2002



Signature of Practitioner

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